STATE OF LOUISIANA

DEPARTMENT OF ENVIRONMENTAL QUALITY

IN THE MATTER OF: ENFORCEMENT TRACKING NO.

AE-CN-01-0222 GEORGIA GULF CHEMICALS

AND VINYLS, L.L.C., ENFORCEMENT TRACKING NO. IBERVILLE PARISH - ID NO. 2455 MM-CN-02-0078 AND 0078A

GEORGIA GULF LAKE CHARLES, L.L.C. ENFORCEMENT TRACKING NO.

CALCASIEU PARISH - ID NO. 4013 AE-CN-03-0244

PROCEEDINGS UNDER THE LOUISIANA ENFORCEMENT TRACKING NO.

ENVIRONMENTAL QUALITY ACT AE-CN-03-0340 LA. R.S. 30:2001, ET SEQ.

SETTLEMENT AGREEMENT

The following Settlement is hereby agreed to between Georgia Gulf Chemicals and Vinyls, L.L.C. and Georgia Gulf Lake Charles, L.L.C. (collectively "Respondent") and the Louisiana Department of Environmental Quality ("LDEQ" or "the Department"), under authority granted by the Louisiana Environmental Quality Act, LSA - R.S. 30:2001, et seq. (the "Act").

Introduction

I.

The Respondents are two related corporate entities that own and operate chemical plants in the State of Louisiana. Georgia Gulf Chemicals & Vinyls, L.L.C. ("GGCV") owns and operates a chemical plant in Plaquemine, Iberville Parish, Louisiana (the "Plaquemine Facility"). Georgia Gulf Lake Charles, L.L.C. ("GGLC") owns and operates a vinyl chloride monomer ("VCM") facility in Lake Charles, Calcasieu Parish, Louisiana (the "Lake Charles Facility"). Respondent GGCV's Plaquemine facility operates under Louisiana Air Permit No. 881-M2 issued July 28, 1995, Title V Operating Permit No. 881-V0 issued September 2, 1998, Title V Operating Permit No. 2224-V0

issued September 21, 1999, and several other permits. The facility also operates a Nebraska boiler under interim status pursuant to the Boiler and Industrial Furnace Burning Hazardous Waste (BIF) Rule. In addition, the Plaquemine facility has submitted Title V permit applications and/or applications to modify existing Title V permit applications (hereinafter "Applications") for its various plants and units.

Respondent GGLC's vinyl chloride monomer (VCM) plant in Lake Charles/Westlake, Calcasieu Parish, Louisiana was formerly a part of the CONDEA Vista Chemical Complex. Respondent acquired the VCM Plant on November 12, 1999. The facility operated under Permit No. 0520-00012-03 issued on March 9, 1994 until issuance of Permit No. 0520-00012-04 on December 23, 2002. The facility is subject to the National Emission Standard for Vinyl Chloride, 40 CFR 61, Subpart F.

Department's Findings

Compliance Orders Issued to Plaquemine Facility in 2002 & 2003

Π.

On September 26, 2002, the Department issued a Consolidated Compliance Order and Notice of Potential Penalty, Enforcement Tracking No. MM-CN-02-0078 (the "September 2002 Order") to Respondent GGCV's Plaquemine Facility, which was based upon the following findings of fact:

- 1) GGCV allowed chlorine/chloride emissions to exceed the total allowable site emissions limit established in the 1999 Certification of Compliance, in violation of LAC 33:V.3007.C.1.c.
- 2) During the simultaneous operation of the permitted halogen acid furnace and the Nebraska boiler, GGCV allowed the Nebraska boiler to exceed the 1999 Certification

- of Compliance limit of 200 gph for chlorine/chloride Tier II emissions on March 21, 2002, in violation of LAC 33:V.3007.C.1.c.
- 3) GGCV had an unauthorized release of 3.42 lbs. of vinyl chloride from the VCM/EDC Process Unit on March 8, 2002, in violation of LAC 33:III.905 and §§ 2057(A)(1) and (A)(2) of the Act.

GGCV filed a timely request for hearing on the September 2002 Order. On March 10, 2003, the Department issued Amended Consolidated Compliance Order and Notice of Potential Penalty, Enforcement Tracking No. MM-CN-02-0078A (the "March 2003 Order"), deleting Paragraph III of the Findings of Fact portion of the September 2002 Order which alleged exceedances of chlorine/chloride emissions limits pertaining to Respondent GGCV's halogen acid furnace and/or Nebraska boiler. Respondent GGCV filed a Protective Request for Hearing on the March 2003 Order on April 8, 2003.

Exceedances of Air Emission Limits at Plaquemine Facility

III.

Through a Settlement with the Department on or about October 31, 2002 (the "2002 Settlement"), Respondent GGCV's Plaquemine facility received authorization, while its Title V Permit Applications are pending, to operate certain emission points within emission limits different than as set forth in its current air permits. As of this date, the Department has not acted upon any of the Applications other than those for the PVC Plant and the VCM Industrial Furnace, for which Title V permits were issued in 1998 and 1999, respectively, but for which permit modification Applications are still pending.

In the context of preparing its annual emissions report for the year 2002, Respondent GGCV determined, through estimates of actual emissions, that certain currently applicable emission limits (including interim limits established in the 2002 Settlement) had been exceeded for the Year 2002 and, without adjustment, would likely be exceeded in 2003 under anticipated operating conditions. These findings were reported to the Department on Respondent GGCV's Quarterly Progress Report submitted to the Department on April 28, 2003, as well as during a May 29, 2003 meeting between representatives of the Department's Office of Environmental Compliance and representatives of Respondent GGCV. Respondent GGCV's correspondence dated June 26, 2003 reported the exceedances and additional details and facts related to same and noted that Respondent was undertaking a comprehensive review of its emission calculation methodologies and permit Applications to prevent recurrence of situations where requested emission limits were improperly calculated. Respondent supplemented the June 26th letter with a November 3, 2003 letter reporting additional exceedances determined as a result of the comprehensive review. Respondent filed appropriate permit modification Applications in August and September 2003 which reflected findings of this comprehensive review. A December 11, 2003 letter reported additional potential exceedances determined as the result of an August 2003 trial burn of the Nebraska boiler.

V.

On January 8, 2004, the LDEQ issued Consolidated Compliance Order and Notice of Potential Penalty, Enforcement Tracking No. AE-CN-03-0340 (the "January 2004 Order"), to the

Plaquemine Facility, concerning potential violations voluntarily disclosed to the Department as noted above, which was based upon the following findings of fact:

- A. On March 8, 2002, Respondent GGCV submitted a modified Utilities/Wastewater Plant Title V Permit application containing requested PM₁₀ permit limits for EIQ Nos. 4-99, 5-99, 6-99, 7-99, 8-99, 9-99, 10-99, 11-99, 12-99, and 14-99. The requested permit limits were based on a one-time sampling of each cooling tower. Respondent GGCV was granted authorization to emit PM₁₀ up to these requested limits pursuant to the 2002 Settlement. Recent sampling over several months indicates that estimates of actual emissions of PM₁₀ from these emission points exceed the limits authorized in the 2002 Settlement.
- B Further pertaining to the Wastewater/Utilities Plant, recent emission estimates indicate the emission limit for vinyl chloride at EIQ No. 12-99 authorized by the 2002 Settlement was exceeded in 2002 and 2003.
- C. Further, the modified Utilities/Wastewater Plant Title V Permit application submitted on March 8, 2002 requested fugitive emissions limits for cumene, ethyl benzene, and toluene at EIQ No. 8-00. Respondent GGCV was granted authorization to emit these substances up to the requested limits pursuant to the 2002 Settlement. Respondent GGCV has since learned that, due to an oversight, the estimated fugitive emissions from a cumene biological surge tank vapor condensate transfer line were not included in these limits, and thus these limits are estimated to have been exceeded in 2002 and 2003.
- D. Furthermore, the modified Utilities/Wastewater Title V Permit application submitted on March 8, 2002 requested permit limits for ethyl benzene at EIQ No. BT-CAP, and Respondent was authorized to emit ethyl benzene up to this limit pursuant to the 2002 Settlement. A recent Water 8 Model run at the wastewater plant to confirm emissions found estimated ethyl benzene emissions to be higher than the limits authorized in the 2002 Settlement. Results of this modeling and recent estimates further revealed that the interim emission limits authorized by the 2002 Settlement at BT-CAP for ammonia and benzene have been exceeded for 2002 and 2003.

Further pertaining to EIQ No. BT-CAP, recent sampling revealed the presence of ethylene glycol, which had not previously been identified in the biosystem wastewater feed stream, and thus was not permitted or authorized by the 2002 Settlement.

Further pertaining to EIQ No. BT-CAP, Respondent discovered during its permit application review that dichloromethane emissions at BT-CAP were not included in the permit applications submitted through March 8, 2002, and thus not included in the 2002 Settlement.

- E. Further concerning the Wastewater/Utilities Plant, recent sampling revealed the presence of ethylene glycol, which had not previously been identified in the biosystem wastewater feed stream, and thus not included in emission limits at EIQ No. C-CAP in the 2002 Settlement.
- F. Further pertaining to the Wastewater/Utilities Plant, based on concentration changes in the biosystem feed, reflected by the recent modeling, Respondent GGCV estimates that certain interim emissions limits authorized by the 2002 Settlement at the carbon adsorption system (EIQ No. 2-99) have been exceeded in 2003 and require adjustment to ensure compliance under all reasonably anticipated operating conditions.
- G. Further pertaining to the Wastewater/Utilities Plant, based on concentration changes made on several biosystem feed stream organics, reflected by the recent modeling, emissions estimates exceeded interim emissions limits authorized by the 2002 Settlement at EIQ Nos. 5-89A, 5-89B, 5-89C, and 5-89D for 2003 and require adjustment to ensure compliance under all reasonably anticipated operating conditions.
- H. Respondent GGCV operates a Nebraska boiler within its Phenol/Acetone plant (EIQ No. 2-90). (Respondent GGCV has agreed to cease operation of the Nebraska boiler by January 8, 2009.) A modified Title V Permit application was submitted on October 31, 2001 requesting emission limits for mercury/mercury compounds, antimony, and chromium VI. These limits were based on AP-42 factors for natural gas combustion, since earlier analyses of the boiler's hazardous waste fuels showed these metals as non-detect. Respondent GGCV was granted authorization to emit these metals up to the requested limits pursuant to the 2002 Settlement. Respondent performed an elective Risk Assessment Metals Burn for chromium data on September 24-26, 2002 and analyzed for all RCRA metals. Based on emission estimates utilizing data from the Metals Burn, the metal emission limits authorized by the 2002 Settlement are being exceeded. Furthermore, as a result of its permit application review, Respondent GGCV discovered that arsenic, beryllium, cadmium, dioxins, furans, lead, selenium and zinc were not indicated in the permit modification application filed on October 31, 2001 and thus not included in the 2002 Settlement.
- I. Further pertaining to the Nebraska boiler, the polycyclic aromatic compounds (PAC/PAH) emission limits requested in the permit modification application submitted on October 31, 2001 were based on an AP-42 factor calculation. Respondent GGCV received authorization to emit PAC/PAH up to these limits pursuant to the 2002 Settlement. A recent review of TRI and permit calculation methods and 1997 trial burn data for this boiler indicates that actual PAC/PAH analysis was available and due to an oversight was not used for emissions calculations submitted for 1997-2001. Based on this burn data, emissions estimates for 2002 and 2003 exceed the authorized limits for PAC/PAH.
- J. Further pertaining to the Nebraska boiler, Respondent GGCV requested annual emission limits for n-hexane and sulfur dioxide at EIQ No. 2-90 in the permit modification application

submitted on October 31, 2001, and Respondent GGCV was given authorization in the 2002 Settlement to emit up to these limits. Emission estimates based on recent data indicate that these limits were exceeded in 2002 and 2003.

- K. Further pertaining to the Nebraska boiler, an acetophenone fugitive emission limit at EIQ No. 11-00 was requested in the modified Nebraska Boiler Title V Permit application submitted on October 31, 2001, for fugitive emissions from ancillary equipment, and Respondent GGCV received authorization to emit acetophenone fugitives up to the requested limit pursuant to the 2002 Settlement. Emission estimates based on recent data indicate that the authorized acetophenone fugitive emission limit has been exceeded for 2002 and 2003.
- Further pertaining to the Nebraska boiler, a recent trial burn indicated that the interim HCl limits authorized by the 2002 Settlement require adjustment to ensure compliance under all reasonably anticipated operating conditions.
- M. Respondent GGCV submitted a modified VCM/EDC Plant Title V Permit application on April 1, 2002 requesting fugitives emission limits at EIQ No. 1-83 (Plant Fugitives) for carbon tetrachloride, chloroform, 1,2-dichloroethylene, and ethylidene dichloride. These limits were estimated using 120% of 2001 emission estimates. Respondent GGCV was granted authorization to emit up to these requested limits pursuant to the 2002 Settlement. Based on current estimates, the annual fugitive emissions limits authorized by the 2002 Settlement for carbon tetrachloride, chloroform, 1,2-dichloroethylene, and ethylidene dichloride at EIQ No. 1-83 were exceeded in 2002 and 2003. According to the Respondent, GGCV's VCM/EDC Plant's and VCM Industrial Furnace Area's VOC emissions are within currently applicable limits, despite the referenced estimated exceedances for specific VOC constituents.
- N. Further pertaining to the VCM Plant, during Respondent GGCV's permit application review, it realized that lead and mercury/mercury compound emissions at EIQ No. CAP-Furnace were not included on the EIQs submitted with the modified Title V permit application on April 1, 2002 and thus not included in the 2002 Settlement. Respondent has since submitted modified Title V permit applications on September 20, 2002 and August 29, 2003 disclosing these emissions.
- O. Further concerning the VCM Plant, emissions estimates based on detailed point source review indicate that the emission limits authorized in the 2002 Settlement for 1,2-dichloroethane (EDC), ethylene, and hydrogen chloride due to oxyhydrochlorination unit start-ups and shutdowns (a General Condition XVII activity) were exceeded in 2002 and 2003.
- P. Respondent GGCV submitted a modified VCM Industrial Furnace Title V Permit application on April 5, 2002 requesting an emission limit for HCl fugitives from ancillary equipment at

- EIQ No. 1-98. Respondent GGCV was granted authorization to emit HCl fugitive emissions up to the requested limit pursuant to the 2002 Settlement. Respondent GGCV has since learned that, due to an oversight, this requested limit did not include fugitives from non-LDAR monitored components. Recent estimates by Respondent GGCV indicate that the currently authorized limit was exceeded in 2002 and in 2003.
- Q. Further pertaining to the VCM Industrial Furnace, recent estimates indicate that the ethylene emission limit authorized by the 2002 Settlement at EIQ No. IN-CAP was exceeded in 2002 and 2003. Respondent GGCV's permit application review also revealed that ethylene oxide emissions at EIQ IN-CAP were not included in the Title V permit modification application submitted on April 5, 2002 and thus not included in the 2002 Settlement.
- R. Further concerning the VCM Industrial Furnace, emissions estimates based on a detailed source review indicate that the emission limit for furans authorized by the 2002 Settlement at EIQ No. IN-CAP was exceeded in 2002 and 2003.
- S. Furthermore, the modified VCM Industrial Furnace Title V permit application submitted on April 5, 2002 did not seek emission limits for 1,1,2,2-tetrachloroethane but requested fugitive emission limits from ancillary equipment at EIQ No. 1-98 for the following: hexachloroethane, pentachloroethane, tetrachloroethylene, 1,1,2-trichloroethane, and vinyl chloride. These limits were estimated using 120% of 2001 emission estimates. Respondent GGCV was granted authorization to emit up to these requested limits pursuant to the 2002 Settlement. Based on current estimates, these annual fugitive emissions limits for EIQ No. 1-98 were exceeded in 2002 and 2003. According to the Respondent, GGCV's VCM/EDC Plant's and VCM Industrial Furnace Area's VOC emissions are within currently applicable limits, despite the referenced estimated exceedances for specific VOC constituents.
- T. Respondent GGCV submitted a Caustic/Chlorine Title V Permit application on July 13, 2001 requesting a sniff gas discharge blower (EIQ No. 43-73) chlorine emissions limit and was authorized to emit chlorine at EIQ No. 43-73 up to the requested limits pursuant to the 2002 Settlement. Emissions estimates based on additional sampling and analyses indicate that the currently-authorized limits were exceeded for 2002 and 2003.
- U. Respondent GGCV's modified Cogeneration Title V Permit application submitted on December 20, 2001 did not address n-hexane and total VOC emissions from natural gas condensate loading as a General Condition XVII activity, and thus these emissions were not included in the 2002 Settlement.
- V. Further concerning the Cogeneration Plant, a review of EIQ calculations and plant information indicates the maximum hourly emission limits authorized by the 2002 Settlement for sulfur dioxide at T-CAP EIQ Nos. 2-95, 3-95, and 4-95 may not be sufficient

- to address spikes in natural gas sulfur concentrations, a condition which does not frequently occur but which according to Respondent is beyond its control.
- W. Emissions estimates based on a recent point source review of the Phenol Plant indicate that the authorized annual and hourly maximum emission limits for methanol at EIQ No. 1-96 have been exceeded and may continue to be exceeded as a result of methanol desorption caused by preferential adsorption of other volatile organic carbons.
- X. Further pertaining to the Phenol Plant, Respondent GGCV's permit application review revealed that acetophenone emissions at EIQ No. 64-73 were not included in the modified Title V permit application submitted on December 20, 2001 and thus not included in the 2002 Settlement.
- Y Further concerning EIQ No. 64-73 in the Phenol Plant, emissions estimates based on a recent detailed point source review indicate that the emission limits authorized by the 2002 Settlement for benzene, phenol, and total VOCs were exceeded in 2002 and 2003.
- Z. The Department alleges that the above emissions limit exceedances constitute violations of the 2002 Settlement, the applicable air permit(s), LAC 33:III 501.C.4, LAC 33:III.507.B.2, and §§ 2055, 2057(A)(1) and (A)(2), and 2060.L of the Act.

April/May 2003 Multi-Media Inspection Issues at Plaquemine Facility

VI.

An inspection of Respondent GGCV's Plaquemine Facility by the Department on or about April 18, 2002 revealed that the Respondent failed to review and amend the Spill Prevention and Control (SPC) plan every three (3) years. At the time of the inspection, the last update of the Respondent's SPC plan occurred in January 1999. The failure to review and amend the SPC plan every three (3) years is in violation of La. R.S. 30:2076(A)(3), LAC 33:IX.501.A, and LAC 33:IX.905.F.

On or about April 28, 2003 through May 7, 2003, representatives of the Department performed a multi-media inspection of Respondent GGCV's Plaqumine Facility resulting in the following violations being found:

- A. The Respondent allowed the accumulation of hazardous waste sludge-like tank bottoms to remain in permitted tanks for greater than one (1) year without written approval or authorization from the Department, in violation of LAC 33:V.2205.C.
- B. The Respondent conducted leak detection/repair activities in 1999, that required Tank 02-47520 to be removed from service, decontaminated, tested, and then reseated and sealed to the concrete base. These activities constitute a response to leaks or spills as described in LAC 33:V.1913, requiring the Respondent to obtain and submit to the Department a certification by an independent, qualified, registered, professional engineer that the repaired system is capable of handling hazardous waste without release for the intended life of the facility. The Respondent's failure to obtain and submit this certification to the Department within seven (7) days of returning the tank to service is a violation of LAC 33:V.1913.F.
- C. The Respondent failed to set an automatic waste feed cutoff (AWFCO) for maximum steam production on the Nebraska Boiler, in violation of LAC 33:V.3007.G. By letter dated May 16, 2003, the Respondent documented that this limit was set on May 8, 2003.
- D. The Respondent set the AWFCO for maximum combustion temperature on the Nebraska Boiler at 2426°F instead of the maximum limit of 2372°F demonstrated in the 1999 Certification of Compliance, in violation of LAC 33:V.3007.G. In a letter dated May 16, 2003, the Respondent documented that the maximum combustion temperature limit was correctly set on May 8, 2003.
- E. The Respondent failed to test the AWFCO system of the Nebraska Boiler at least every seven (7) days when hazardous waste is burned to verify operability, in violation of LAC 33:V.3007.J.3. By letter dated May 16, 2003, the Respondent stated that the AWFCO system is being tested every seven (7) days. The Respondent further stated that should an event arise where the testing of the system would unduly restrict or upset operations, written documentation and the approval of an alternate schedule by the Department shall be placed in the operating record.
- F. The Respondent failed to provide documentation that the daily visual inspections of the Nebraska Boiler and associated equipment were conducted on May 20, 2002, and during the month of July 2002, as required by LAC 33:V.3007.J.2, in violation of LAC 33:V.3007.K.
- G. The Respondent exceeded the ash feed rate limit of 9687 lb/hr for the Nebraska Boiler on January 1, 2003, in violation of LAC 33:V.3007.C.1.d. The Respondent's ash feed rate to the boiler was 9982 lb/hr.

- H. The Respondent failed to document all required information on the daily inspection sheets for the Nebraska Boiler, in violation of LAC 33:V.4317.D. Specifically, inspection sheets were mislabeled as to the area/equipment inspected, actual conditions causing problems were not always noted, and remedial actions were not documented.
- I. The Respondent failed to control fugitive emissions from the Nebraska Boiler in violation of LAC 33:V.3007.H. Inspection sheets documented the presence of fugitive emissions/soot emissions for a period of two (2) months with no remedial actions noted, in violation of LAC 33:V.4317.C.
- J. The Respondent failed to test the AWFCO system for the industrial furnace at a minimum of once per month and note the results in the operating log, in violation of LAC 33:V.309.A and Condition V.A.6 of the hazardous waste operating permit effective on June 12, 1991, and now administratively continued. Specifically, the AWFCO test records for March, May, July, August, and September of 2002 were missing and the test due in January of 2003 was conducted in February of 2003.
- K. The Respondent exceeded the permitted ash feed rate limits for the industrial furnace, in violation of LAC 33:V.309.A and Condition V.A.4.f of the hazardous waste operating permit effective on June 12, 1991, and now administratively continued. Specifically, ash feed rates were calculated for June 3, 2002, (6.26 lb/hr), September 7, 2002, (6.65 lb/hr), and May 13, 2003, (6.13 lb/hr). The feed rate exceeded the permitted ash feed limit of 4.5 lb/hr for all three (3) days calculated.
- L. The Respondent exceeded the permitted chlorine feed rate limit to the industrial furnace on June 3, 2002, in violation of LAC 33:V.309.A and Condition V.A.4.d of the hazardous waste operating permit effective on June 12, 1991, and now administratively continued. Specifically, the chlorine feed rate for June 3, 2002, was 4710 lb/hr and the permitted limit for chlorine is 4550 lb/hr.
- M. The Respondent failed to maintain the 2000 annual inventory records for Alnor Dew Pointer Model 7000UF, serial number 19364, in violation of LAC 33:XV.104.B. This device was disposed of on February 25, 2003.
- N. The Respondent failed to obtain authorization from the Department to extend the leak test interval from one (1) year to three (3) years, in violation of LAC 33:XV.320.A.2 and Radioactive Material License LA-2774-L01, condition 7.C. This violation has been addressed.
- O. The Respondent failed to post the Chlorine Receiver Holder Model 5179A, serial number 146 correctly, in violation of LAC 33:XV.451.A. Specifically, the Chlorine

Receiver was posted with "Caution, Radioactive Material" instead of "Caution Radiation Area". This violation has been addressed.

- P. The Respondent failed to post a current copy of the Radiation Protection Regulations, Radioactive Material License LA-2774-L01, amendment number 27, and the operating procedures applicable to work under the license, in violation of LAC 33:XV.1011.A.1-3. This violation has been addressed.
- Q. The Respondent was not following approved wastewater monitoring procedures, specifically:
 - a. The pH of BOD samples were not determined and adjusted if necessary,
 - b. TSS filter constant weights were not determined prior to filtration,
 - c. Laboratory control standards (LCS) were not run,
 - d. S-class weights were not used to verify that the TSS balance was within calibration, and
 - e. The auto-sampler at outfalls 002, 202, 302, and 402 had a short distance of plastic collection tubing and several acid/base neutral compounds were collected at these outfalls.

The failure to conduct monitoring according to approved test procedures is in violation of LPDES permit LA0007129 (Part III, Sections A.2, and C.5), La. R.S. 30:2076 (A)(3), LAC 33:IX.501.A, LAC 33:IX.2355.A, and LAC 33:IX.2355.J.4.

- R. The Respondent was not maintaining records of wastewater monitoring, specifically:
 - a. TOC blank analytical results were not recorded, and
 - b. Temperature logs were not generated for the outfall sampler refrigerator.

The failure to maintain records of monitoring is in violation of LPDES permit LA0007129 (Part III, Sections A.2, and C.3), La. R.S. 30:2076 (A)(3), LAC 33:IX.501.A, LAC 33:IX.2355.A, and LAC 33:IX.2355.J.2.

An inspection conducted by the Department on or about April 28-29, 2003, and a subsequent file review revealed the following effluent violations:

Date	Outfall	Parameter	Permit Limit	Sample Result
July 2003	202	Phenol monthly avg.	0.14 lbs/day	0.16 lbs/day
		Phenol daily max.	0.24 lbs/day	2.07 lbs/day
March 2003	402	BOD ₅ monthly avg.	298 lbs/day	311 lbs/day

November 2002	102	TSS daily max.	2,878 lbs/day	4,551 lbs/day
September 2002	102	TRC monthly avg.	25.6 lbs/day	32.6 lbs/day
		TRC daily max.	34.4 lbs/day	456.8 lbs/day
		Total chromium mo.	0.13 lbs/day	0.16 lbs/day
		avg.		
		Total chromium daily	0.25 lbs/day	0.28 lbs/day
		max.		

Each effluent limit excursion is a violation of LPDES permit LA0007129 (Part I and Part III Section A.2), La. R.S. 30:2076(A)(3), LAC 33:IX.501.A, LAC 33:IX.501.D, and LAC 33:IX.2355.A.

On or about April 30, 2003, an inspection of the Respondent GGCV's Plaquemine Facility was conducted to determine the degree of compliance with the Act and Air Quality Regulations. The following was noted during the course of the inspection:

A review of the Respondent's railcar/truck loading operations indicated that railcars containing phenol and AMS (alpha-methyl styrene) are routinely being cleaned without controls for emissions to the air. The emissions to the air from the railcar cleaning operations are not addressed in an air permit. The Respondent submitted a letter dated May 16, 2003, to the Department in response to the April 30, 2003, inspection. According to the Respondent's letter dated May 16, 2003, the Respondent has addressed this issue by including the emissions from this activity in an application for a Title V air permit for this facility. By initially failing to apply for an air permit and subsequently creating emissions that were not addressed in an air permit, the Respondent is in violation of LAC 33:III.501.C.1, LAC 33:III.501.C.2, and Sections 2057(A)(1) and (A)(2) of the Act.

Respondent GGCV responded to and stated its position on all allegations arising out of the inspections and file reviews referenced in Paragraph VI in correspondence to the Department dated May 16, 2003, February 9, 2004, and March 23, 2004.

Other Noncompliance at the Plaquemine Facility in 2002 and 2003

VII.

Between February 6, 2002 and September 27, 2003, the following unauthorized discharges of VCM with some associated PVC resin occurred as a result of PVC reactor releases at the Plaquemine Facility: A 10,847 lb. release of VCM on February 6, 2002; a 573 lb. release of VCM on January 29, 2003; a 2,854 lb. release of VCM on February 3, 2003; a 6,683 lb. release of VCM on April 8, 2003; a 1,709 lb. release of VCM on April 25, 2003; and a 55,656 lb. release of VCM on September 27, 2003. According to the Respondent, the latter five releases occurred while operating its new PVC plant computer system. According to the Respondent, the February 6, 2002 release occurred when the former PVC Unit process computer malfunctioned. The Department alleges these releases were in violation of LAC 33:III.905 and Sections 2057(A)(1) and (A)(2) of the Act.

VIII.

Respondent GGCV has also reported that other smaller releases that exceeded an applicable RQ, Title V incidents, and control device bypasses have occurred at the Plaquemine facility in 2002 and 2003. All of these incidents had previously been reported to the Department and are outlined in Respondents' January 26, 2004 and February 9, 2004 letters to the Department. GGCV notes that it followed its startup, shutdown, and malfunction plan during these events to the greatest extent possible in order to minimize emissions or any other adverse impacts and to return the equipment to normal operations. GGCV also notes that many of the events leading to these incidents were due to factors beyond GGCV's control and/or were

unanticipated situations that fall beyond the realm of normal operations, and thus do not constitute a violation. The Department alleges that these releases were a violation of LAC 33:III.905 and La.R.S. 30:2057(A)(1) and (A)(2).

Regarding the control device bypasses, GGCV submits that it maintains these devices in a diligent fashion and in good working order. Specifically, the Regenerative Thermal Oxidizer (RTO) was on-line and operating 99.7% of the time in 2002 and 99.3% of the time in 2003, and the Centralized Vent Recovery System (CVRS) was on-line and operating 98.5% of the time in 2002 and 99.6% of the time in 2003. Furthermore, total emissions from these bypasses in 2002 and 2003 did not exceed the reportable quantity for any individual compound.

GGCV has notified the Department that short-term steps have been taken and long-term actions continue to be implemented as to both the RTO and the CVRS to reduce/eliminate the unit shutdowns. These are outlined in a January 26, 2004 letter to the Department and include replacement and overhauling of a substantial portion of the electrical distribution system (estimated cost: \$167,600.00) and replacement of the CVRS compressor with a gas-driven eductor system (estimated cost: \$292,000.00).

Compliance Orders Issued to Lake Charles Facility in 2002 & 2003

IX.

On April 24, 2002, the Department issued a Consolidated Compliance Order and Notice of Potential Penalty, Enforcement Tracking No. AE-CN-01-0222 (the "April 2002 Order"), to the Lake Charles Facility which was based upon the following findings of fact:

On or about May 21 and 22, 2001, during an inspection of GGLC's Lake Charles, Louisiana VCM Plant, the Department noted that GGLC had taken the control

- devices (water scrubbers) on the muriatic acid storage tanks (Emission Points IV-D and IV-E) out of service, in violation of LAC 33:III.905 and §§ 2057(A)(1) and 2057(A)(2) of the Act.
- On or about July 12, 2001, a file review of GGLC's Lake Charles facility noted that, according to GGLC's Vinyl Chloride Emissions Quarterly Report, dated December 15, 2000, GGLC exceeded the 10 ppm concentration of vinyl chloride from the VCM plant thermal oxidizer vent stack (Emission Point V-A) for a single 3-hour period on or about October 11, 2000. Such exceedance is a violation of 40 CFR 61.63(a), LAC 33:III.5116, Specific Condition No. 2 of Air Permit No. 0520-00012-03, LAC 33:III.501.C.4, and §§ 2057(A)(1) and 2057(A)(2) of the Act.
- On or about August 16, 2001, a file review of GGLC'S Lake Charles facility noted that [GGLC] experienced an unauthorized release of 60.62 lbs. of vinyl chloride to the air on or about March 2, 2001, when the thermal oxidizer unit shut down. According to the Respondent, the vent header pressure continued to increase until an automatic vent valve opened to depressure the system through a water scrubber, which occurs only under emergency conditions. The Department alleges this was a violation of LAC 33:III.905, and §§ 2057(A)(1) and 2057(A)(2) of the Act.

Respondent GGLC filed a timely request for hearing on the April 2002 Order.

X.

On October 14, 2003, the Department issued a Consolidated Compliance Order and Notice of Potential Penalty to Respondent GGCV's Lake Charles facility, Enforcement Tracking No. AE-CN-03-0244 (the "October 2003 Order"), which was based upon the following findings of fact:

During an inspection of Respondent GGCV's VCM Plant on or about June 30 through July 2, 2003, monitoring records of the VOC components for the time period of January 1 through June 30, 2003 were reviewed. The records indicated that the facility was following the LDAR program of NSPS Subpart VV, with a leak definition of 10,000 ppm rather than the 1000 ppm leak definition under LAC 33:III.2122. Due to using the 10,000 ppm leak definition, the Respondent did not identify 5 valves (V-004, V-039, V-101, V-237, and V-243) as leakers, and therefore, did not make an effort to repair the 5 leaking valves within 15 calendar

days after the leak was detected. According to the Monitor Details Report, the valves had leak rates of 1043 ppm; 2,708 ppm; 2,033 ppm; 1,585 ppm; and 4,414 ppm, respectively, all of which were monitored on April 9, 2003. During the inspection, Respondent immediately monitored the 5 valves. It was noted that valves V-004 and V-237 were no longer leaking. Valves V-039, V-101, and V-243 were still leaking, and were repaired that same day. The failure to repair leaking valves within 15 days is a violation of LAC 33:III.2122.C.3 and §§ 2057(A)(1) and (A)(2) of the Act.

Respondent filed a Protective Request for Hearing on the October 2003 Order on November 18, 2003. Respondent responded to these allegations in correspondence dated January 26, 2004.

Other Noncompliance at the Lake Charles Facility

XI.

On six separate occasions between June and August 2002, Respondent GGLC exceeded the 10 ppm concentration of vinyl chloride for a single 3-hour period. All six exceedances were self-reported by Respondent. Correspondence from Respondent GGLC indicates that the June 2002 releases were a result of a failure of a high voltage bus connection at a neighboring facility which caused power interruption causing both thermal oxidizers to shut down, and the August 2002 incident occurred when the OHC unit tripped due to a broken control valve positioner. Such exceedances are a violation of 40 CFR 61.63(a), LAC 33:III.5116, LAC 33:III.501.C.4, and \$\\$ 2057(A)(1) and 2057(A)(2) of the Act.

XΠ.

On April 25, 2003, Lake Charles Facility voluntarily disclosed noncompliance with a small source exemption for T-552. According to the disclosure, the Lake Charles Facility exceeded the annual emission rate set forth in the exemption for ethylene dichloride from T-552 for calendar years 2000, 2001, and 2002. The Lake Charles Facility also disclosed emissions of

vinyl chloride, ethylene, chloroform, and carbon tetrachloride in those years. The emission rates for EDC, vinyl chloride, ethylene, chloroform, and carbon tetrachloride were well below MERs, and, according to Respondent, the actual emissions of these air toxics were lower than emissions reported in the Lake Charles Facility's EIQs for these years due to errors in emission calculations. The Lake Charles Facility has also installed carbon canisters to mitigate any emissions vented from T-552.

XIII.

Respondent GGLC has also reported air releases that exceeded an applicable RQ and control device bypasses have occurred at the Lake Charles facility in 2002 and 2003. All of these incidents had previously been reported to the Department and are outlined in Respondents' January 26, 2004 and February 9, 2004 letters to the Department. GGLC notes that it followed its startup, shutdown, and malfunction plan during these events to the greatest extent possible in order to minimize emissions or any other adverse impacts and to return the equipment to normal operations. GGLC also notes that many of the events leading to these incidents were due to factors beyond GGLC's control and/or were unanticipated situations that fall beyond the realm of normal operations, and thus do not constitute a violation. The Department alleges that these releases were a violation of LAC 33:III.905 and §§ 2057(A)(1) and (A)(2) of the Act.

XIV.

On or about February 17, 2004, GGLC voluntarily reported areas of noncompliance with its Stormwater Pollution Prevention Plan (SWPPP) at the Lake Charles facility. Specifically, GGLC did not collect quarterly visual samples for the third quarter of Calendar Year (CY) 2001

or the second and third quarters of CY 2002; did not perform quarterly stormwater structure visual inspections during the 4th quarter of CY 2000, CY 2001, CY 2002, and the 1st, 2nd and 3rd quarters of CY 2003; and did not perform annual site compliance evaluations during CY 2001 or 2002. GGLC has notified the Department that it has reviewed the SWPPP with pertinent personnel and conducted training on general awareness of the requirements of the SWPPP to prevent future recurrence of these problems.

Remaining Miscellaneous Items

XV.

On June 15, 2002, a leak of vinyl chloride from a tanker car occurred at the Kansas City Southern (KCS) rail yard in Calcasieu Parish, located several miles from the Lake Charles Facility. According to a September 12, 2002 letter submitted by GGLC to the Department following an August 27, 2002 meeting between Respondent and the Department's Enforcement Division, the rail car was loaded at the Lake Charles Facility on June 14, 2002 and was transferred from the site through a neighboring facility, Sasol North America, by contract switching personnel (CANAC). According to the Respondent, KCS personnel then transferred the car to the KCS rail yard, located several miles from the plant. The car arrived at the rail yard at approximately 1:00 a.m. on June 15, 2002 and the leak was first observed by KCS personnel at approximately 6:15 a.m. later that morning. Respondent GGLC's investigation revealed that the car was properly loaded at the Lake Charles Facility and was not leaking when it left the site and has submitted documentation confirming this information. Respondent GGLC's emergency response team responded to and mitigated the leak immediately. The Respondent presented

information during the August 27, 2002 meeting indicating that the VCM leak was not caused by Respondent GGLC and that Respondent GGLC bears no responsibility for this event.

Terms & Conditions

XVI.

Respondents neither admit nor deny the findings of fact or the allegations of violations included in the above-referenced matters.

XVII.

Respondents deny that they committed any violations rendering them liable for any fines, forfeitures, and/or penalties. However, in the interest of avoiding the time, expense and uncertainty of further protracted litigation, the parties to this Settlement (the "2004 Settlement") have agreed to fully and finally compromise and settle all of the allegations which are the subject of the above-referenced matters on the terms and conditions set forth in the 2004 Settlement and to compromise, settle and dismiss with prejudice the above-referenced matters as to all claims therein.

XVIII.

Respondents, without making any admission of facts or liability under state or federal statutes or regulations, agree to pay, and the Department agrees to accept, a payment in the amount of Fifty Thousand and no/100 (\$50,000.00) Dollars, of which Four Thousand and no/100 (\$4,000.00) Dollars represents the Department's enforcement costs and Twenty Thousand and no/100 (\$20,000.00) Dollars represents the economic benefits of non-compliance, in settlement of the claims set forth in this Agreement.

XIX.

In addition to the amount specified in Paragraph XVIII, and as part of this 2004 Settlement, the Respondents, without making any admission of facts or liability under state or federal statutes or regulations, agree to expend the amount of Two Hundred Twenty Thousand and no/100 (\$220,000.00) Dollars to implement and/or perform beneficial environmental projects over a period of time not to exceed one year. These projects, along with the approximate amount to be spent on each, are listed below and specifically incorporated into this 2004 Settlement:

(1) Respondent GGCV's Plaquemine Facility will spend Fifty-Five Thousand and no/100 (\$55,000.00) Dollars to replace valves in ethylene service that have the greatest potential for leaking with valves that are believed to be the best available technology for preventing leaks and minimizing emissions while still meeting all other necessary specifications. (Ethylene is not a volatile organic compound subject to the LDAR regulations, but is one of the highly-reactive VOCs on which the Department is focusing because of the ozone non-attainment status of the five parishes surrounding Baton Rouge, including Iberville Parish, where GGCV's Plaquemine Facility is located). Respondent will then assess and report to the Department on the effectiveness of this project in quarterly progress reports as provided by this 2004 Settlement. The funds for this project will be allocated to the purchase of the new valves and the labor necessary for replacement of the old valves with the new valves. The purpose of this project is to reduce the emission of substances designated as "Highly-Reactive Volatile Organic Compounds" (HRVOCs), in an effort to reduce the potential for formation of atmospheric ozone.

- Respondents will donate \$130,000 to Louisiana State University to replace the existing 30-year old 200 hp low pressure steam boiler at the LSU Assembly Center (approximate cost: \$50,000) and one of the 300 hp hot water boilers at the Highland Utility Center (approximate cost: \$80,000). These replacements are estimated to result in a reduction of NOx emissions by approximately 2,052 lbs/yr (a 70% reduction) and a reduction of natural gas use by 1,419 mcf per year. Respondents are responsible only for the \$130,000 payment, and LSU will be responsible for all other aspects of these boiler projects, including engineering, design, procurement, and installation. The purpose of this project is to reduce the emission of NOx, which is recognized to be an ozone precursor, in an effort to reduce the potential for formation of atmospheric ozone, as well as the reduction of other air pollutants.
- (3) Respondents will donate \$15,000 to the Mercury Removal Program of one or more local schools in Iberville and Calcasieu Parishes to defray the costs of (a) removing and disposing of present mercury contamination, and (b) eliminating the use of mercury instruments in local educational institutions. It is estimated that this donation will allow the removal of mercury from approximately 15 schools.
- (4) Respondents will make a monetary donation of, or perform one or more beneficial environment projects at a cost of \$20,000, for one or more of the following purposes:
 - (a) Sponsor local anti-litter, clean-up, recycling, or other environmentally-beneficial efforts through one or more projects of the Iberville Parish Planning Group or other such project approved by the Department.
 - (b) Sponsor environmental education through one or more projects of the Iberville Parish Planning Group or other such project approved by the Department.
 - (c) A contribution to the Mercury Removal/Education Program at LDEQ.

XX.

In addition, and although not otherwise required to do so, the Respondents are voluntarily undertaking the following additional projects to reduce emissions and protect air quality:

(1) Respondent GGCV is completing installation of a new "automatic kill" computer package for the PVC reactors at its Plaquemine Facility, at a cost of approximately

\$810,000.00. The parties anticipate that this project will alleviate or substantially reduce the likelihood of future episodic PVC and vinyl chloride releases.

(2) Respondent GGCV's Plaquemine Facility is taking short-term and long-term actions to reduce/eliminate shutdowns and bypasses of its Regenerative Thermal Oxidizer (RTO) and Centralized Vent Recovery System (CVRS). Short-term actions taken as to the RTO include: 1) installing a first-out monitor to identify which electrical motor is causing shutdowns; 2) changing specifications on hydraulic hoses' secondary reinforcement (armored braided steel sheathing); 3) installing a high liquid level alarm on vessel and revising procedures; and 4) installing alternative scanners more tolerant of minor voltage fluctuations. Long-term actions being implemented as to the RTO include: 1) elimination of electrical insulators on the main power distribution feeder (cost: \$97,000); 2) replacement and overhaul of circuit breakers in the electrical distribution system (cost: \$70,000); and 3) change system-control program so motors can better handle brief power interruptions (cost: \$600).

Short-term actions taken as to the CVRS include: 1) improved cooling water delivery system; 2) installed larger and improved lube oil delivery system; 3) modified piping to prevent compressor rotor fouling; and 4) changed practice from repairing to replacing worn shafts. Long-term, GGCV will replace the CVRS compressor with a gas-driven eductor system. This capital project has been approved for \$292,000, with initial construction to begin February 2004 and an anticipated completion date of December 31, 2004.

(3) Respondent GGLC's Lake Charles facility has voluntarily committed to consolidating its LDAR programs into a Consolidated Fugitive Program and is retagging all equipment and revising process drawings to reflect same. The cost of this project is \$34,549.46, plus an additional \$500/month to keep process drawings current. The parties anticipate this project will reduce fugitive emissions and prevent or significantly reduce the recurrence of LDAR noncompliance.

XXI.

The overall payment and expenditure by Respondents under this 2004 Settlement is \$1,574,149.46.

XXII.

Respondents shall submit quarterly reports regarding their progress on the project(s) performed pursuant to Paragraph XIX above. The first report shall be due on the 5th day of the month following the end of the corresponding quarter of the date the Department signs this 2004 Settlement. Quarterly reports shall be submitted on the 5th of the month following the end of every corresponding quarter thereafter until each project is completed. Each such quarterly report shall include a description of the project, tasks completed, tasks remaining, the percentage completed, and money expended on each project through the date of the report. Upon completion of all projects required under this 2004 Settlement, Respondents shall submit a final report to include a summary of all the information previously submitted and a total amount spent on the projects listed above. It shall also contain a certification that the projects were completed as described.

XXIII.

If, for any reason, Respondents do not expend at least the amounts indicated in Paragraph XIX above on beneficial environmental projects, then they shall, in their final report, propose additional donations or projects for the Department's approval or pay to the Department an amount equal to the difference between the amount of money agreed to be spent and the amount of money actually spent.

XXIV.

The total amount of money expended by Respondents on cash payments to LDEQ and on beneficial environmental projects, as described above, shall be considered a civil penalty for tax purposes, as required by La. R.S. 30:2050.7(E)(1).

XXV.

Respondents further understand that the Department may consider the inspection report(s), the Consolidated Compliance Order and Notice of Potential Penalty, Enforcement Tracking Nos. AE-CN-01-0222, MM-CN-02-0078, MM-CN-02-0078A, AE-CN-03-0244, AE-CN-03-0340, and this Settlement for the purpose of determining compliance history in connection with any future enforcement or permitting action by the Department against Respondents. In any such action, the Respondents shall be estopped from objecting to the above-referenced documents being considered as proving the violations alleged herein for the sole purpose of determining Respondents' compliance history.

XXVI.

Neither by entering into this 2004 Settlement nor by taking any action in accordance with it (including making the payments required by the Agreement), shall Respondents be deemed to have admitted any liability for any purpose or any responsibility for, or wrongdoing relating to, the matters addressed in this 2004 Settlement, or to have admitted any issues of law or fact related to or arising out of the matters addressed in the 2004 Settlement. It is the intent of the parties to the 2004 Settlement that the execution of this 2004 Settlement, the terms and conditions of this 2004 Settlement, or any act or performance by the Respondents under this

2004 Settlement shall not be (i) admissible in any proceeding for the purpose of imputing, implying, or otherwise raising an inference of wrongdoing by the Respondents, or (ii) used against the Respondents in any other proceeding with any third party not a signatory to the 2004 Settlement.

XXVII.

This 2004 Settlement shall be considered a final order of the Secretary for all purposes, including, but not limited to, enforcement under La. R.S. 30:2025(G)(2), and Respondents hereby waive any right to administrative or judicial review of the terms of the 2004 Settlement. Respondents, however, expressly reserve the right to administrative or judicial review of the actions of the Department acting upon, interpreting and/or applying the terms of this 2004 Settlement. Respondents further expressly reserve any and all rights, defenses, claims, demands, and causes of action which it may have with respect to any matter, action, event, claim or proceeding relating in any way to the matters addressed in this 2004 Settlement against any person, firm or corporation except as expressly provided herein. Respondents do not admit, and retain the right to contest in any subsequent proceedings, other than proceedings for the purpose of enforcing this Agreement, the validity of the facts or the conclusions of law contained herein.

XXVIII.

The 2004 Settlement is being made in the interest of settling the State's claims and avoiding for both parties the expense and effort involved in litigation or an adjudicatory hearing. In agreeing to the compromise and settlement, the Department considered the "Nine Factors" for

issuing civil penalties set forth in La. R.S. 30:2025(E) of the Act and the rules relating to beneficial environmental projects set forth in LAC 33:I. Chapter 25.

XXIX.

The Respondents have caused a public notice advertisement to be placed in the official journal of the parish-governing authority in Iberville and Calcasieu Parishes. The advertisement, which was approved by the Department in form, wording and size, announced the availability of the 2004 Settlement for public view and comment and the opportunity for public hearing.

Respondents have submitted proof of publication affidavits to the Department and, as of the date the 2004 Settlement is executed on behalf of the Department, more than 45 days have elapsed since publication of the Notice.

XXX.

Payment as specified in Paragraph XVIII is to be made within 30 days from notice of the Secretary's signature. If payment is not received within that time, this Agreement is voidable at the option of the Department. Penalties are to be made payable to the Department of Environmental Quality and mailed to the attention of Darryl Serio, Office of Management and Finance, Financial Services Division, Department of Environmental Quality, P. O. Box 4303, Baton Rouge, Louisiana 70821-4303.

XXXI.

In consideration of the above, any claims for penalties or other civil relief are hereby compromised and settled in accordance with the terms of the 2004 Settlement.

XXXII.

Each undersigned representative of the parties certifies that he or she is fully authorized to execute this 2004 Settlement on behalf of his/her respective party, and to legally bind such party to its terms and conditions.

RESPONDENTS GEORGIA GULF CHEMICALS & VINYLS, L.L.C. AND GEORGIA GULF LAKE CHARLES, L.L.C.
BY: Charles P. Freeburgh (signature)
CHARLES P. FREEBURGH (printed name)
TITLE: GENERAL MANAGER
cate original before me this 10 day of
PUBLIC 1
. No.: Amy Marronneaux, Bar Roll # 20776 res: atmy death
STATE OF LOUISIANA
Mike D. McDaniel, Ph.D., Secretary Department of Environmental Quality
-11 -1 A
BY: HUNOR PRESU
Printed name: Harold Leggett, Assistant Secretary Office of Environmental Compliance
cate original before me this day of
PUBLIC J. 1 B. B. L. A # 20451
res:



State of Louisiana

P.O. BOX 94005

BATON ROUGE

70804-9005

September 28, 2004

Mike D. McDaniel, Secretary La. Department of Environmental Quality Office of the Secretary P.O. Box 4301 Baton Rouge, LA 70821-4301

Re: AG Review of DEQ Settlement;

Georgia Gulf Chemicals & Vinyls, L.L.C. and Georgia Gulf

Lake Charles, L.L.C.

AE-CN-03-0244, and AE-CN-03-0340

Dear Secretary McDaniel:

Pursuant to the authority granted to me by Art. IV, Sec. 8 of the state constitution and R.S. 30:2050.7(E)(2)(a), I approve the above referenced settlement.

Sincerely,

CHARLES C. FO

Attorney General

CCF/mlc